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REMARKS

Independent claims 1 and 6 have each been amended to more clearly recite the subject matter of the present invention. Dependent claims 4, 5, 9, and 10 have been amended to correspond with amendments to the associated independent claims.

Claims 1-10 were rejected as obvious based upon the combination of admitted prior art and the Makris et al. '141 and Magnusson et al. '052 references. However, neither the admitted prior art nor either of the Makris et al. or Magnusson et al. references shows or suggests a resistance element assembly that is vertically supported by at least one uppermost ceramic support disc that supports the weight of the resistance element assembly, and that is positioned laterally adjacent to an insulation layer in order to maintain the at least one uppermost ceramic support disc at a lower temperature than a furnace interior temperature, as recited in each of independent claims 1 and 6.

In the Makris et al. reference the resistance element assembly is in inverted condition, as opposed to the orientation of the resistance element assembly of the claimed invention, and is supported at its bottom. Additionally, and very significantly, none of the ceramic support discs 42, 43, 55, or 56 is disclosed as laterally adjacent an insulation layer at a furnace roof and above an underside of the insulation layer, as recited in each of independent claims 1 and 6.

In the Magnusson et al. reference the single, serpentine-shaped heating element is disclosed as supported within a recess 5. Its legs extend horizontally,

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not vertically as in the present invention. And as in the Makris et al. reference, the carrying elements 4A and 4B are not disclosed as laterally adjacent an insulation layer at a furnace roof and above an underside of the insulation layer, as recited in each of independent claims 1 and 6. In fact, carrying elements 4A and 4B for carrying resistance element 2 are each within recess 5, and no carrying element in the form of a ceramic support is shown in or forming part of end plug 3. Accordingly, the invention as claimed in amended claims 1 and 6 is clearly patentably distinguishable over the references relied upon.

Claims 2-5 each depend from independent claim 1, either directly or indirectly, and claims 7-10 each depend directly from independent claim 6, and therefore the same distinctions as are noted above in connection with claims 1 and 6 apply with equal effect to those dependent claims. Further, the dependent claims contain additional recitations that further distinguish the invention as so claimed from the teachings of the references relied upon.

Additionally, it should be noted that the references relied upon contain no suggestion or other motivation that would lead one of ordinary skill in the art to attempt to combine them as the examiner has done. Each of the references relied upon by the examiner relates to a different problem than that to which the present invention is directed, and none of the references teaches the solution to that problem as that solution is claimed in the claims of the present application. Thus, one having only ordinary skill in the art and having before him the references relied upon would not be led to combine the teachings of those references as the examiner has done.

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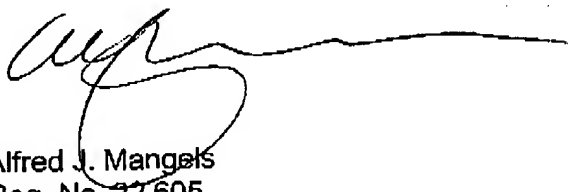
Only by some hindsight guidance gleaned from knowledge of what is contained in the present disclosure would one even consider the disparate references that were relied upon. But it is an improper basis for rejection to use as a road map or as a template an inventor's disclosure to aid in picking and choosing particular parts of particular references that allegedly can be combined to render obvious that which only the inventor has taught. To use the teachings of the present invention to assemble references that are directed to different problems and that teach different solutions, and to identify and attempt to combine individual aspects of such references, is an improper hindsight reconstruction of the prior art while having applicant's invention in mind. Additionally, it amounts to using against an inventor that which only he has taught.

In any event, because of the differences noted above between the subject matter as claimed in amended independent claims 1 and 6 and the disclosures relied upon, those disclosures, whether they be considered individually or in any combination, do not teach or even remotely suggest the claimed invention. Based upon the foregoing amendments and remarks, the claims as they now stand in the application are believed clearly to be in allowable form. The claims patentably distinguish over the disclosures contained in the references that were cited and relied upon by the examiner. Consequently, this application is believed to be in condition for allowance, and therefore reconsideration and reexamination of the application is respectfully requested with a view toward the issuance of an early Notice of Allowance.

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The examiner is cordially invited to telephone the undersigned attorney if this amendment raises any questions, so that any such question can be quickly resolved in order that the present application can proceed toward allowance.

Respectfully submitted,



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